



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/820,142

04/08/2004

Yoichi Hachitani

330-275

6656

23117

7590

02/10/2006

NIXON & VANDERHYE, PC
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER

CLARK, SHEILA V

ART UNIT

PAPER NUMBER

2823

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/820,142

Applicant(s)

HACHITANI, YOICHI

Examiner

S. V. Clark

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2, 8 is/are allowed.
- 6) ☒ Claim(s) 1, 3, 6 and 9-12 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 6, 7, 9, 11, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dumesnil et al. in view of the Admitted prior art in the instant disclosure on pages 1-2

Dumesnil et al teaches the use of glass seals in semiconductor packages that have a linear expansion coefficient in the range of that recited in the claims (see col.2) and claim 1 recites that said glass also may be formed of copper and phosphorous (CuO and PO).

As the claims recitation of "made of plastic" fails to render the entire package as consisting of plastic but may also include certain piece parts in said package made of plastic. As semiconductor packages may be include an array of components pieces including such materials as plastic (such as for encapsulations, underfill materials, coatings) and as the teachings of Dumesnil et al are relative to typical semiconductor packages in general it would have been therefore obvious to one having ordinary skill in this art that the typical package of Dumesnil would include typical components such as plastics (i.e. encapsulations, underfill materials, coatings etc.) which are commonly used for protective purposes.

Further though Dumesnil et al fails to discuss use of glass as windows he does mention use of glass sealing materials in the broad sense and as glass windows and

Art Unit: 2823

lenses are commonly used to seal packages it would have been obvious to one having ordinary skill in this art that the sealing glass of Dumesnil also includes those glass windows and lenses as they are commonly used as seals as mentioned above and as these glass windows (i.e. lens) are further taught to be typical regarding the image sensing devices of the admitted prior art in the disclosure on pages 1-2.

Use of temperatures in the range of those recited in claim 7 is also taught (col.3, line 26).

Claim 9 contains components that depend on the used of method of making characteristics (i.e. precision press molded) given no patentable weight in determining the patentability of the final device product.

Note that a Aproduct by process≡ claim is directed to the product per se, no matter how actually made, In re Hirao 190 USPQ 15 at 17(footnote 3). See also In re Brown, 173 USPQ 685; In re Luck, 177 USPQ 523; In re Fessman, 180 USPQ 324; In re Avery, 186 USPQ 161 and In re Marosi et al, 218 USPQ 289, all of which make it clear that it is the patentability of the final product per se which must be determined in Aproduct by process≡ claims, and not the patentability of the process, and that, as here, an old or obvious product produced by a new method is not patentable as a product, whether claimed in Aproduct by process≡ claims or not.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dumesnil et al in view of the Admitted prior art in the instant disclosure on pages 1-2 and Hamanaka et al.

Dumesnil et al teaches the use of glass seals in semiconductor packages that have a linear expansion coefficient in the range of that recited in the claim (see col.2).

Further though Dumesnil et al fails to discuss use of glass as windows he does mention use of glass sealing materials in the broad sense and as glass windows and lenses are commonly used to seal packages it would have been obvious to one having ordinary skill in this art that the sealing glass of Dumesnil also includes those

glass windows and lenses as they are commonly used as seals as mentioned above and as these glass windows (i.e. lens) are further taught to be typical in the admitted prior art in the disclosure on pages 1-2.

Glasses or lenses may typically be produced by press molding. Hamanaka teaches press molding of a lens or glass (i.e. col. 1, line 44) in the description of the prior art relating that this method is well known in the production of lens (i.e. glass). As Dumesnil teaches that his device is related to typical package convention, it would have been obvious that these typical conventions would include the well known use of press molding to form a glass lens.

Use of temperatures recited in the claim is also taught (col.3, line 26).

Claims 1, 3, 6, 7, 9,10, 11,12 are rejected.

Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2, 8 are considered allowable over the prior art of record.

Applicant's arguments filed 10-25-05 have been fully considered but they are not persuasive. The claims as they are broadly recited are deemed to be taught by Dumesnil. Glass windows of semiconductor packages are typically used to close up an openings for sealing purposes and would therefore be considered sealing glasses and therefore applicable to the teaching of Dumesnil. Dumesnil teaches that the glasses of his device may be used as semiconductor package materials which are deemed to include glass window means. Further the teachings of Dumesnil fail to exclude window

sealing means. The instant claims further recite very little structure other than "glass for a window of a semiconductor package" which lends itself to broad interpretation relative to the structural characteristics of glass package windows.

As applicant's arguments details that the method of "press molding" in claim 10 is related to an optical function. An optical structure nor function however has not been recited in claim 10 and the "lens" recited in only recited to reference the "shape" of the window.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to S. V. Clark at telephone number (571) 272-1725.


S. V. Clark
Primary Examiner
Art Unit 2823

February 3, 2006